

HIGH PERFORMANCE Steel Wire Ropes



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HIGH PERFORMANCE Steel Wire Ropes

GP is a complete line of wire ropes based on the most modern manufacturing technologies.

Its versatility and the possibility to combine different technologies enable the development of wire ropes custom-made for each user, fulfilling the most demanding specific needs. The purpose of the GP line is to satisfy the customers requirements with high demand applications in equipments and gears in which the extension of lifetime under maximum safety conditions is a key requirement.

GP line is formed by three main groups: wire ropes with compacted strands, wire ropes with plastic infiltration and wire ropes with eight or more outer strands.

IPH QUALITY

The quality certificate issued by IPH guarantees the traceability and compliance with national and international standards, which can be applied to the controls carried out throughout the manufacturing process, from the wire production to the final product.

MANAGEMENT SYSTEM CERTIFICATIONS:

American Petroleum Institute, API Monogram Spec Q1, Spec 9A.
TÜV Rheinland, ISO 9001:2015.
Fundação Vanzolini NBR, ISO 9001:2015.

WIRE ROPES SPECIFIC CERTIFICATIONS:

Marine use

Lloyd's Register plant certification.

Elevators

IRAM-INTI and IRAM 840 product certification.

General purpose

ABNT NBR and ISO 2408 product certification.

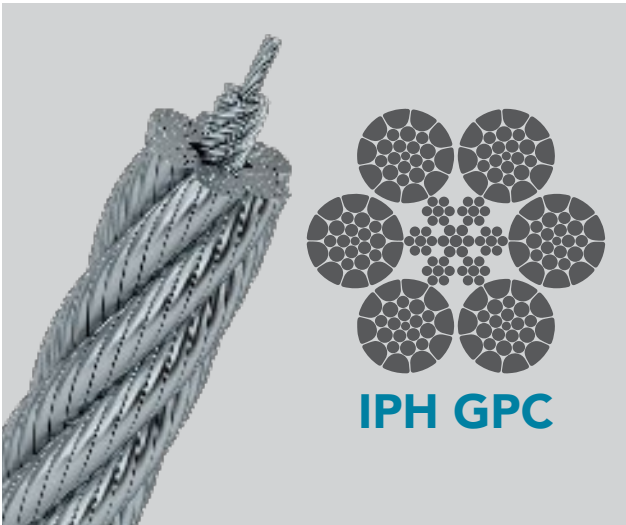
Offshore containers lifting slings

DNV 2.7-1 product certification.

Wire rope slings

IRAM 5221 Flemish eye product certification.

6-STRAND WIRE ROPES



Advantages and features

- Their high breaking load allows the operation with higher safety factors.
- Compacted strands enlarge contact surface, extending lifetime of wire rope and reducing sheave wear.
- Higher resistance to abrasion and drum compression.
- Do not use with swivel.

IPH GPC wire rope line has compacted strands which increase the breaking load of the wire rope and the sheaves surface contact. Therefore, sheaves and rope wear, is reduced. It also improves resistance against crushing, making these wire ropes ideal for their application in intensive work in multilayer drums such as oil drilling, clamshell cranes, draglines, etc.

Minimum Breaking Load

Diameter	Approx. Mass	Grade 1960 N/mm ²		Grade 2160 N/mm ²	
		[kN]	[t]	[kN]	[t]
10,00	0,44	78,3	7,99	86,1	8,79
11,00	0,53	94,7	9,66	104	10,6
12,00	0,63	113	11,5	124	12,7
13,00	0,74	132	13,5	146	14,8
14,00	0,86	153	15,7	169	17,2
15,00	0,99	176	18,0	194	19,8
16,00	1,12	200	20,4	220	22,5
17,00	1,27	226	23,1	249	25,4
18,00	1,42	254	25,9	279	28,5
19,00	1,58	283	28,8	311	31,7
20,00	1,75	313	31,9	344	35,1
21,00	1,93	345	35,2	380	38,7
22,00	2,12	379	38,7	417	42,5
23,00	2,32	414	42,2	455	46,5
24,00	2,52	451	46,0	496	50,6
25,00	2,74	489	49,9	538	54,9
26,00	2,96	529	54,0	582	59,4
27,00	3,19	570	58,2	628	64,0
28,00	3,43	614	62,6	675	68,9
29,00	3,68	658	67,2	724	73,9
30,00	3,94	704	71,9	775	79,1

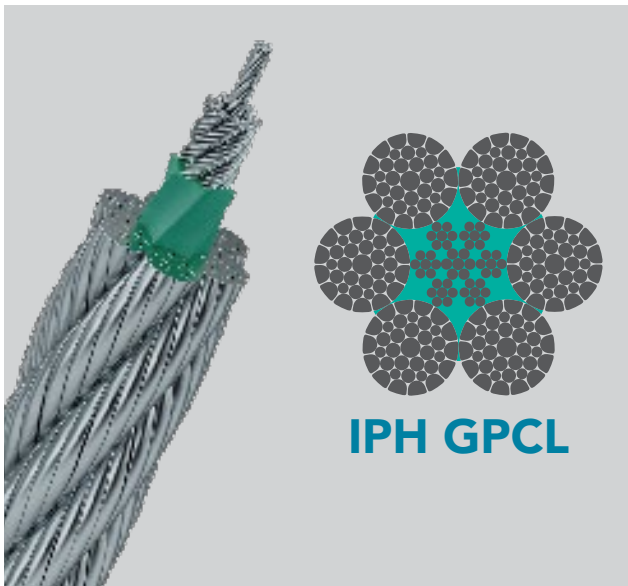
Minimum Breaking Load

Diameter	Approx. Mass	Grade 1960 N/mm ²		Grade 2160 N/mm ²	
		[mm]	[kg/m]	[kN]	[t]
31,00	4,21	752	76,7	827	84,4
32,00	4,48	801	81,8	882	90,0
33,00	4,77	852	87,0	938	95,7
34,00	5,06	905	92,3	995	102
35,00	5,36	959	97,8	1060	108
36,00	5,67	1010	103	1120	114
37,00	5,99	1070	109	1180	120
38,00	6,32	1130	115	1240	127
39,00	6,66	1190	121	1310	134
40,00	7,01	1250	128	1380	141
42,00	7,72	1380	141	1520	155
44,00	8,48	1520	155	1670	170
46,00	9,27	1660	169	1820	186
48,00	10,10	1800	184	1980	202
50,00	11,00	1960	200	2150	219

Construction: 6x26 WSCO or 6x36 WSCO, depending on diameter range.

Coating: bright or galvanized, fully lubricated.

For other rope diameters or grades not specified in this catalog, please contact IPH.



Advantages and features

Besides the characteristics of the IPH GP line, steel core plastic injected adds:

- Higher structural dynamic stability.
- Reduced internal friction due to plastic coating.
- Better load distribution and improvement of bending fatigue resistance.
- Do not use with swivel.

Minimum Breaking Load

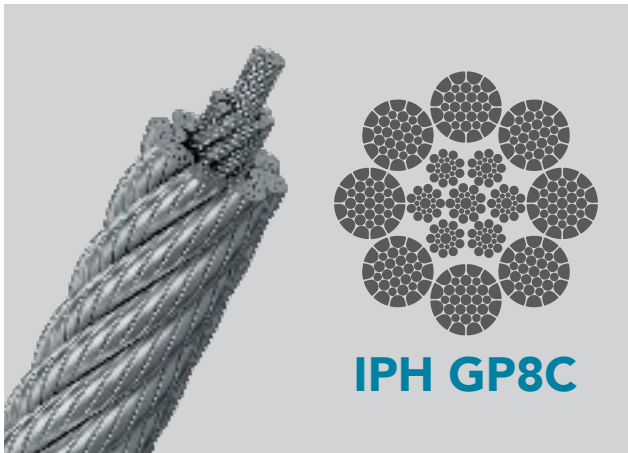
Diameter	Approx. Mass	Grade 1960 N/mm ²		Grade 2160 N/mm ²	
		[mm]	[kg/m]	[kN]	[t]
22,00	2,13	398	40,6	438	44,6
26,00	2,98	555	56,6	611	62,3
28,00	3,46	644	65,7	709	72,3
32,00	4,51	841	85,8	926	94,5

Construction: 6x36 WS, depending on diameter range.

Coating: bright (galvanized on request).

For other rope diameters or grades not specified in this catalog, please contact IPH.

8-STRAND WIRE ROPES



Advantages and features

- Higher breaking load due to compacted strands that increase cross metallic section.
- Higher resistance to wear, reducing sheaves and wire rope wear.
- Less diameter reduction under tension.
- Better load distribution and improvement of bending fatigue resistance.
- Do not use with swivel.

GP8C Group has 8 compacted strands, which offers a larger contact surface and greater flexibility compared to 6-strand wire ropes. They are ideal for working in ladle cranes, container cranes and other intensive work machinery that has single-layer drums.

Minimum Breaking Load

Diameter	Approx. Mass	Grade 1960 N/mm ²		Grade 2160 N/mm ²	
		[mm]	[kg/m]	[kN]	[t]
10,00	0,45	78,0	7,96	86,0	8,78
11,00	0,54	94,4	9,63	104	10,6
12,00	0,64	113	11,5	124	12,7
13,00	0,77	132	13,5	146	14,9
14,00	0,87	153	15,6	169	17,2
15,00	1,01	176	18,0	194	19,8
16,00	1,14	200	20,4	220	22,4
17,00	1,29	225	23,0	248	25,3
18,00	1,45	254	25,9	279	28,5
19,00	1,62	282	28,8	310	31,6
20,00	1,80	313	31,9	344	35,1
21,00	1,98	345	35,2	379	38,7
22,00	2,16	379	38,7	416	42,4
23,00	2,37	414	42,3	455	46,4
24,00	2,58	451	46,0	495	50,5
25,00	2,80	489	49,9	537	54,8
26,00	3,02	529	54,0	582	59,4
27,00	3,26	570	58,2	628	64,0
28,00	3,50	614	62,7	675	68,9
29,00	3,76	659	67,2	724	73,9
30,00	4,02	704	71,8	775	79,1
32,00	4,57	801	81,7	882	90,0
34,00	5,15	905	92,3	995	102
36,00	5,77	1020	104	1120	114
38,00	6,43	1130	115	1240	127
40,00	7,12	1250	128	1380	141
42,00	7,85	1380	141	1520	155
44,00	8,62	1520	155	1670	170
46,00	9,42	1660	169	1820	186
48,00	10,30	1800	184	1980	202
50,00	11,10	1960	200	2150	219

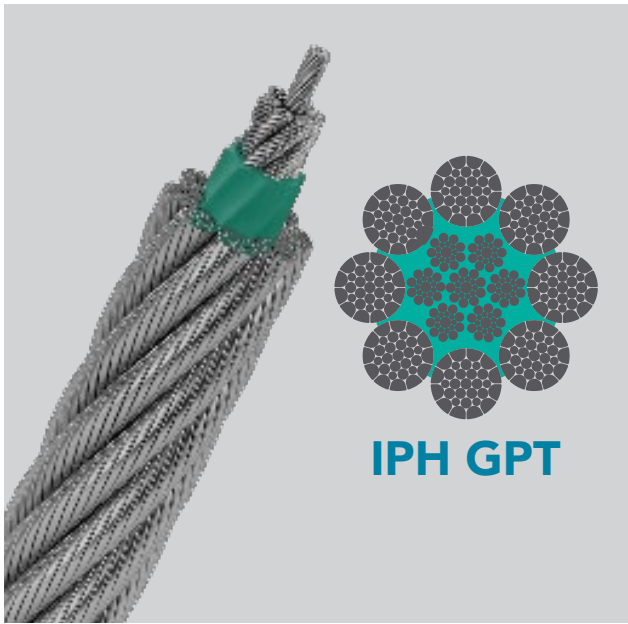
Construction: 8x26, 8x31 or 8x36 WSCO, depending on diameter range.

Coating: bright or galvanized, fully lubricated.

NOTE: in steelmaking, the use of high temperature lubricant is recommended.

For other rope diameters or grades not specified in this catalog, please contact IPH.

8-STRAND WIRE ROPES



Advantages and features

- Higher breaking load due to compacted strands that increase cross metallic section.
- Higher resistance to wear, reducing sheaves and wire rope wear.
- Less diameter reduction under tension.
- Increase of sheaves contact surface.
- Higher structural dynamic stability.
- Reduced internal friction due to plastic coating.
- Better load distribution and improvement of bending fatigue resistance.
- Do not use with swivel.

IPH GPT wire ropes offer an excellent performance, considering whole range of requirements that a rope could be submitted. The eight compacted strands reduce sheaves and wire rope wear, and the plastic infiltration of the core provides a higher stability and breaking load. They are ideal for container cranes and for many other high-demand equipment. Their permanent use under high temperatures is not recommended.

Minimum Breaking Load

Diameter	Approx. Mass	Grade 1960 N/mm ²		Grade 2160 N/mm ²	
		[kN]	[t]	[kN]	[t]
10,00	0,46	87,7	8,95	96,4	9,84
12,00	0,66	126	12,9	139	14,2
13,00	0,78	148	15,1	163	16,6
14,00	0,90	172	17,6	189	19,3
15,00	1,03	198	20,2	217	22,1
16,00	1,17	225	23,0	247	25,2
17,00	1,33	254	25,9	278	28,4
18,00	1,49	284	29,0	312	31,8
19,00	1,66	317	32,3	348	35,5
20,00	1,83	351	35,8	385	39,3
21,00	2,02	380	38,8	417	42,5
22,00	2,22	417	42,6	457	46,7
23,00	2,43	455	46,4	500	51,0
24,00	2,64	496	50,6	544	55,5
25,00	2,87	538	54,9	590	60,2
26,00	3,10	582	59,4	639	65,2
27,00	3,34	628	64,1	689	70,3
28,00	3,60	675	68,9	741	75,6
29,00	3,86	721	73,6	794	81,1
30,00	4,13	775	79,1	851	86,8
31,00	4,41	815	83,2	895	91,3
32,00	4,70	869	88,7	953	97,3
33,00	4,99	924	94,3	1010	103
34,00	5,30	981	100	1080	110
35,00	5,62	1040	106	1140	116

CONTINUE

Minimum Breaking Load

Diameter	Approx. Mass	Grade 1960 N/mm ²		Grade 2160 N/mm ²	
		[mm]	[kg/m]	[kN]	[t]
36,00	5,94	1100	112	1210	123
37,00	6,28	1160	118	1280	131
38,00	6,62	1230	126	1340	137
39,00	6,98	1289	132	1420	145
40,00	7,34	1360	139	1490	152
42,00	8,09	1490	152	1640	167
44,00	8,88	1640	167	1810	185
46,00	9,50	1670	170	1850	189
48,00	10,00	1870	191	2060	210
50,00	11,50	2120	216	2320	237

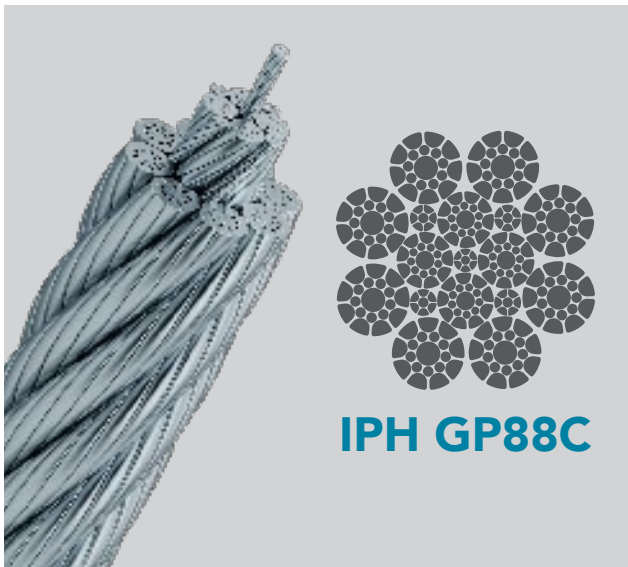
Construction: 8x26, 8x31 or 8x36 WSCO, depending on diameter range.

Coating: bright or galvanized, fully lubricated.

For other rope diameters or grades not specified in this catalog, please contact IPH.



8-STRAND WIRE ROPES (PARALLEL WIRE ROPES)



Advantages and features

- Higher resistance to bending fatigue.
- Larger metallic cross section and higher breaking load.
- Compacted 8 strands that improve contact surface and load distribution, with less wear in wire rope and sheaves.
- Great structural lateral stability.
- 8-strand parallel wire ropes require proper sheave and drum groove dimension. If groove diameter is narrow, deformation or waviness of wire rope may appear. Sheave or drum groove diameter must be 6% larger than wire rope nominal diameter.
- Do not use with swivel.

IPH GP88C line is designed for lifting gear in which flexible wire ropes with high breaking load and great bending fatigue resistance are required. They are specially recommended for use in overhead cranes, electrical hoists, etc.

Minimum Breaking Load

Diameter		Approx. Mass		Grade 2160 N/mm ²	
[mm]	[kg/m]	[kN]	[t]		
6,40	0,20	40,5	4,13		
7,00	0,24	48,8	4,98		
8,00	0,30	63,7	6,50		
9,00	0,39	80,6	8,22		
10,00	0,48	101	10,3		
11,00	0,58	123	12,6		
12,00	0,69	140	14,3		

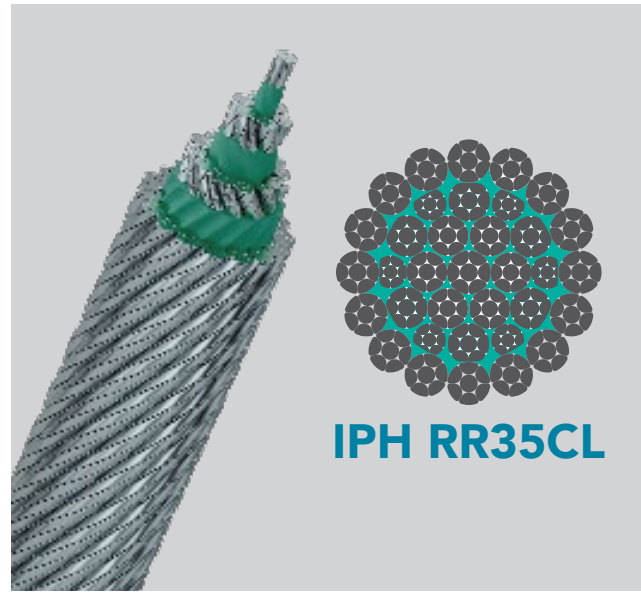
Construction: 8x17 SCO or 8x19 SCO (parallel), depending on diameter range.

Coating: galvanized (bright on request), fully lubricated.

Lay: regular.

For other rope diameters or grades not specified in this catalog, please contact IPH.

NON ROTATION WIRE ROPES



Advantages and features

- Excellent resistance properties against rotation.
- Compact surface that provides great resistance to abrasion and lower sheave wear.
- High breaking load due to increase of metallic cross section thanks to the compacting process.
- Special design and Lang lay provide a great resistance to bending fatigue.
- Excellent properties for bearing compression loads in multilayer drums (especially RR35CL).
- Fully lubricated to achieve high protection against friction and corrosion, combined with galvanized coating.
- Can be used with swivel.



This is a major innovation as regards non rotation wire ropes, required in tower cranes, mobile cranes and high-rise overhead cranes. Compacted strands and parallel design provide a higher breaking load than conventional non rotation wire ropes. At the same time, they provide a greater flexibility and a lower wear of sheaves and wire rope itself.

IPH RR35CL wire rope adds to the RR35C characteristics greater stability and bending fatigue resistance due to internal plastic infiltration. Both wire ropes are used for the same applications. The core impregnation prevents from lubrication loss, internal damp and friction, achieving a longer lifetime.

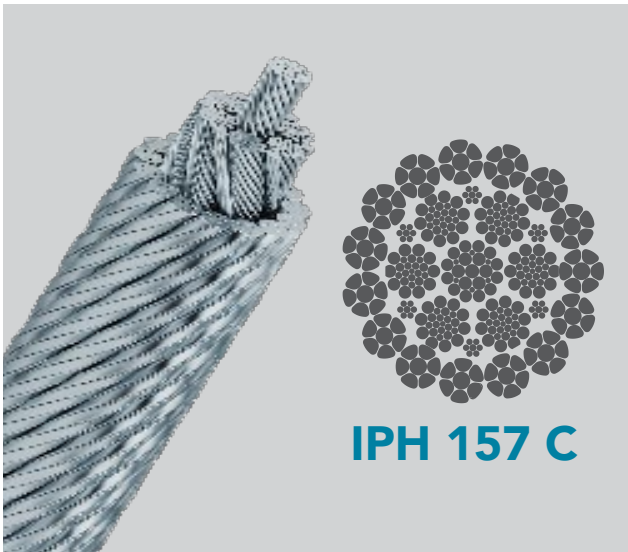


Minimum Breaking Load

Diameter	Approx. Mass	Grade 1960 N/mm ²		Grade 2160 N/mm ²	
		[mm]	[kg/m]	[kN]	[t]
10,00	0,44	87,9	9,00	94,0	9,59
11,00	0,53	106	10,8	113	11,6
12,00	0,63	125	12,8	134	13,7
13,00	0,74	148	15,1	158	16,1
14,00	0,97	182	18,6	195	19,9
15,00	1,11	209	21,3	224	22,9
16,00	1,26	238	24,3	255	26,0
17,00	1,43	268	27,3	287	29,3
18,00	1,60	302	30,8	323	33,0
19,00	1,78	338	34,5	362	36,9
20,00	1,98	373	38,1	399	40,7
21,00	2,18	409	41,7	438	44,7
22,00	2,39	451	46,0	482	49,2
23,00	2,61	493	50,3	527	53,8
24,00	2,85	536	54,7	573	58,5
25,00	3,09	581	59,3	622	63,5
26,00	3,34	629	64,2	673	68,7
28,00	3,87	730	74,5	781	79,7
30,00	4,45	836	85,3	895	91,3
32,00	5,06	944	96,3	1010	103
34,00	5,71	1080	110	1150	117
36,00	6,40	1200	122	1280	131
38,00	7,13	1340	137	1430	146
40,00	7,91	1480	151	1580	161
42,00	8,72	1640	167	1750	179
44,00	9,57	1790	183	1910	195
48,00	11,40	2130	217	2280	233
50,00	12,40	2310	236	2470	252

Construction: 27x7 CO or 35x7 CO, depending on diameter range.
 Coating: galvanized (bright on request), fully lubricated. Lay: Lang.
 For other rope diameters or grades not specified in this catalog, please contact IPH.

NON ROTATION WIRE ROPES



Advantages and features

- Compact surface that provides great resistance to abrasion and lower sheave wear.
- High breaking load due to increase of metallic cross section thanks to the compacting process.
- Great flexibility provides very good spooling performance and to operate under simple and reverse bending.
- Excellent properties for bearing compression loads in multilayer drums.
- Can be used with swivel.

Minimum Breaking Load

Diameter	Approx. Mass	Grade 1960 N/mm ²	
		[kN]	[t]
[mm]	[kg/m]		
14,00	0,91	180	18,4
15,00	1,05	207	21,1
16,00	1,19	236	24,1
17,00	1,34	267	27,2
18,00	1,51	299	30,5
19,00	1,68	332	33,9
20,00	1,85	368	37,6
21,00	2,05	405	41,3

Coating: bright, fully lubricated.

Lay: lang.

For other rope diameters or grades not specified in this catalog, please contact IPH.



IPH VALUE

RESEARCH AND DEVELOPMENT

- Design engineering know-how.
- Field engineering applied to each operation and improvement opportunities analysis, according to every customer needs.
- Modern testing laboratory equipped with state-of-the-art machinery that can simulate actual operation efforts and conditions, enabling us to validate and guarantee rope performance.



INTEGRATION

Integration is part of the company's DNA, starting with the steel wire rod.

- Wire production.
- Strand production.
- Steel, synthetic and natural fiber core production.
- Plastic infiltration process.
- Fitting installation as sockets, standard and custom-made swage end terminals.
- Conditioning and packaging development according to every need.
- Slings manufacture.
- Wooden and steel reels manufacture.



CUTTING EDGE TECHNOLOGY

- Cutting edge facilities and equipment.
- Tools and devices design & developed for each product.
- Process automation and real time controls of key variables.



TRAINED PROFESSIONAL STAFF

- Highly trained engineers and technicians to evaluate, assess, and advise the high performance optimal solution for each application.
- Constant training for clients about good practices regarding the use and application of steel wire ropes, including installation, inspection and discard criteria.



SUPPORT & CERTIFICATION

- Full traceability of the product and its components up to their raw materials.
- Process and type certification.
- Third party tests and certifications.



LATIN AMERICA'S MOST LEADING EDGE INDUSTRIAL LOGISTICS SYSTEM

Founded in 1949 in Buenos Aires, Argentina, IPH has become one of the major players in the manufacturing of steel wire ropes in Latin America, placing itself into a position of leadership through the specialization in achieving solutions for the highest demands in the market.

Since its beginnings, IPH developed a business model based on innovation and high technology investment. Its high quality and customer service standards allow the company to be present among the most competitive markets in the five continents.

Located in Buenos Aires, Argentina, it's plant features 45,000 covered square meters and its production capacity reaches up to 1,500 tons per month. It combines cutting edge technology, highly skilled human resources and a quality management system complying with the leading international standards.

IPH's vertically integrated production process planning involves all steel wire rope's components, from its own manufacture of wires, fiber and steel cores for its ropes to wooden or steel reels and packaging according to customers specifications. This Integration Model is key to the design optimization, productive versatility and sustainability and quality assurance of finished products.

In its two modern Service Centers located in Buenos Aires - Argentina and São Paulo - Brazil, IPH keeps the widest stock of finished goods and facilities featuring state-of-the-art equipment and processes to provide with an excellent customer service and after sale support. IPH carries out multiple purpose steel wire ropes slings manufacturing, cut to length, polyester slings manufacturing, finished product conditioning, lab tests and certification, supplying the market with the most integral proposal on load lifting and handling solutions.

The factory, combined with the two sales and service centers, confers to IPH a highly efficient operation configuring the most modern industrial and logistic system in Latin America.



San Miguel Plant
Buenos Aires, Argentina.



Itapevi Service Center
São Paulo, Brazil.



Bella Vista Service Center
Buenos Aires, Argentina.



HEADQUARTERS

Av. Arturo Illia 4001
B1663HRI – San Miguel
Buenos Aires – Argentina
T: (54.11) 4469-8100
F: (54.11) 4469-8101
sales@iphglobal.com
info@iphglobal.com

BRASILIAN BRANCH

Avenida Nova São Paulo 110 – Itaquí
CEP 06696-100 – Itapeví – SP – Brasil
T/F: (55.11) 4774-7000
comercial@iphglobal.com
iph@iphglobal.com

www.iphglobal.com

IPH. EVOLUTION AS AN ATTITUDE

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